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LIGHT AND POISON: GAS AND HEALTH.

[The following statements and suggestions respecting one of the sources of impurity and ill health in large cities, are from the Lancet, published in London, and have particular reference to the state of things in that city. They possess, however, a general interest, and are worthy of attention, in a preventive point of view, in our less populous but growing cities.—Ed.]

How Londoners contrive to live is a physiological problem. Theory tells us that the functions of the animal economy are sustained in health by the influence of external agents brought into relation with the body in a state of purity. Experience demonstrates to us that the population of this huge metropolis carry on their existence, although possessing none of the elements of life in purity. During a period of four years our Analytical Sanitary Commission has been engaged in exposing the multiform and extensive adulterations of that class of our aliments which recruit the body through the stomach. Its labors are far from exhausted. Is there any solid or liquid that we can eat or drink with a well-founded security that it is either unsophisticated or wholesome? The water we drink is a chemical and mechanical filtrate, prepared with a very distant approach to the successful elimination of ingredients that do not enter into the philosophical definition of the element. The source whence we still continue to draw one of the first necessaries of life is the Thames, which in its ebb receives the unspeakable abominations discharged from the houses of the inhabitants, abominations which in their flow are brought back again in a full tide of seething corruption. If we shun the pestilential banks of the river, we seek in vain for a purer air in the distant streets.

Perhaps the most pleasing, and certainly the most striking and comprehensive plan of acquiring a distinct impression of a large town is to ascend a neighboring eminence, and to survey it as it lays extended as on a map, or model, under our feet. If a stranger wish to inspect the giant city after this fashion, and determine to climb to the top of St. Paul's or Highgate-hill for the purpose, he must not only choose his day well, but also the hour. He must rise early. There is only time for a glimpse. Soon after fire-lighting has begun, the coal-smoke belching forth from 300,000 household chimneys, and no end of factories, gathers rapidly into a cloud, denser and denser, and effectually intercepts the vision of the observer. The smoke, which hangs like a pall over the streets, filling every avenue, is not only a stifling nuisance in itself, but it serves as a convenient medium for the suspension and retention of every other noxious exhalation. The Legislature has decreed that this nuisance shall be abated as far as concerns the smoke from factory chimneys. Dr. Neil Arnott, the man to whom the world is indebted for so many additions to the conveniences of life, has contrived a domestic fire-grate, which, if universally employed, would have the effect of arresting those numerous petty columns of smoke, which contribute in the aggregate a not inconsiderable contingent to the great London cloud. We earnestly trust that the executive will enforce what the Legislature has ordained, and no less earnestly, that the inhabitants of the town will, by the adoption of Dr. Arnott's new stove, do that part which it depends upon themselves to perform.

The very soil is sodden with every kind of compound that can revolt the senses and engender disease. Wherever the outer crust of granite is lifted up for a temporary purpose, the black loam that is brought to sight, and the asphyxiating vapors that arise, are suggestive of leaking sewers and gas-pipes, and the accumulation of everything that is foul and loathsome. The daring skill of the chemist has sought to explore and define the constitution of this artificial soil. Recent researches in this new field of geological investigation, show that there are different strata and different kinds of detestable formations. As a general rule, the lower strata consist of more or less solidified mud, collected by the builders and road-contractors as the first and most appropriate foundation for houses and streets. This diluvial compound is always maintained in its original state of putrescence by the constant oozings from the drains and sewers which intersect it. The upper strata of the great London eocene deposit vary somewhat in their nauseating characteristics from the lower. In the upper strata, nearer the surface, run the gas-pipes; and, from this source, exudes copiously a peculiar venom. The wan and haggard aspect of the unhappy men whose perilous vocation it is to turn up the reeking filth, betrays the effect of the poison upon the system when inhaled in a state of concentration. Is it not worth while to consider what may be the effects of the emanations of this poisonous bed when slowly distilled from the surface, and brought into the general atmospheric circulation of the town in a somewhat diluted form? It is rendered probable, by positive examination, that a cubic foot of earth, when taken indifferently from almost any part of the streets under the pavement, contains enough deleterious compounds proceeding from gas leakage, to poison a strong man. Dr. Letheby has shown that this proportion is constantly and rapidly on the increase. He foretells that a period is at hand when it will be absolutely dangerous to disturb the ground.

Public opinion has been directed with some success against those isolated plague-spots, the intramural graveyards. It is now discovered that the entire superfices of the metropolis is a poison bed. It has become a momentous question to determine what measures can be adopted, if not to purify the earth upon which we dwell, at least to arrest in time its further contamination. That portion of the Augean task which consists in stopping the escape of sewerage, we suppose we must leave to the good intentions and the leisure of the commissioners of sewers. The preservation of the upper strata from further pollution rests chiefly with the gas companies. It is not a matter of doubt that the chief source of the poisonous contamination of the soil is the gas that permeates the tubes in which it is carried for distribution. The gaseous materials escaping from the pipes before consumption are condensed into various horrible compounds with the earth. The chemical elements of these compounds are encountered in other forms during combustion. Whether under the ground or above it, coal gas, which should bring nothing but light, heat and cheerfulness, is ever evolving the most health-destroying emanations. Tried at the burners, the gas, now so universally consumed, is proved to be as pernicious as while circulating in the mains. Dr. Letheby has recently laid before the city commissioners of sewers the results of his examinations into the illuminating power and chemical qualities of the gas supplied to the city of London. It is not our present purpose to consider the different illuminating powers of the gas supplied by the different companies. We will, however, call attention to one remarkable fact. On comparison, we observe that the illuminating power bears a constant inverse proportion to the amount of poisonous contamination: in other words, the defect in the element of light is made up with compensative liberality by the gratuitous supply of ammonia, sulphuretted hydrogen, and bisulphuret of carbon! If the gas escape by leakage from the house-pipes, the deleterious compounds we have just named are those which poison the atmosphere. When the gas is burned, we are inundated with poisonous fumes of a different nature. The sulphur compounds are partly converted into sulphuric acid. The vitriolic vapor is diffused throughout the air in quantity sufficient to corrode whatever is corrodible; and therefore we may fairly assume in quantity sufficient to exert the most deleterious influence upon the constitutions of those who are doomed to inhale it. Dr. Letheby has found that the purest gas burned in London yields no less a proportion than 8·7 grains of anhydrous sulphuric acid to 100 cubic inches, whilst the foulest gives out 13·9 grains! These astounding quantities have been actually separated by chemical processes. But the agency of the corrosive fluid has been amply traced by inspection of the various goods and articles of furniture exposed to its influence. It was discovered, some years ago, that the books in the library of the Athenæum Club were undergoing rapid destruction: the cause was traced to the sulphuric acid formed during the burning of the gas. A contrivance of Prof. Faraday's, whereby the products of combustion could be collected and prevented from being diffused in the apartment, was adopted. The liquid so collected is an intense vitriolic solution. It is found to contain an ounce and a quarter of sulphate of copper to the pint, the copper being derived from the ventilating tube. In the summer of 1842, a committee was appointed by the Athenæum Club to investigate this subject. Dr. Prout reported that he had taken two equal portions of the water used in the house, and had exposed one of these for a fortnight to the air of the drawing-room of the establishment. He found that it acquired a striking increase of sulphuric acid, so that when it was evaporated nearly to dryness it distinctly reddened litmus. Dr. Letheby has examined some of the books injured by the fumes. Wherever these have been exposed they are as rotten as tinder. He relates that almost the entire library of the Earl of Tyrconnel, at Kilpin, has been destroyed in a similar manner. He tells us that in the library of the College of Surgeons there are hundreds, if not thousands, of books, the backs of which are completely rotten from the same cause. Lest it should be considered unproved that the books had been destroyed in this manner by sulphuric acid, Dr. Letheby put the matter to the following conclusive test. He has ascertained, that while the leather on the sides of the books is uninjured, that on the back is completely rotten ; this is dependent on the circumstance that the atmosphere is excluded from the sides by contiguity, while the backs are freely exposed. It is accordingly found, that a scrap of leather taken from the back of a book yields a notable proportion of sulphuric acid. Dr. Letheby again says, " Dr. Christison, the well-known author of our best English treatise 'On Poisons,' informs us, that the gas in Edinburgh kills all the plants in the rooms of that city ; even a bouquet undergoes rapid withering if shut up in a room for some hours where gas is burning freely..................In addition to this he states that the curtains in the upper part of the room are apt to go." It is not possible, adds Dr. Letheby, to examine a single fabric in London without finding it charged with a greater or less proportion of sulphuric acid.

If such be the result of experiment upon the *corpus vile* of inanimate matter, we will ask, what are the effects of this volatilized vitriol upon the lungs of the thousands upon thousands of unfortunate persons helplessly condemned to breathe it for many hours every day? What are its effects upon the chemical and vital properties of the blood? We have here a great fact that cannot hereafter be overlooked in the study of the etiology of diseases. We commend this subject to the special consideration of the committee on industrial pathology lately appointed by the Society of Arts.

How is this intoxication of the atmosphere, blighting everything animate and inanimate, to be avoided? Dr. Letheby points to three modes: the first is directed to the manufacture of the gas ; the second, to its purification ; the third, to a more perfect system of ventilation. He observes that gas is manufactured from materials which are known to contain a large per centage of bisulphuret of iron, and that, although much attention has been directed to the purification of gas from one or two of its impurities, little or no notice has hitherto been taken of the most important of all—namely, bisulphuret of carbon. He suggests that it is advisable that gas should be burnt outside the room whenever it is practicable, and when this is not the case, that the products of combustion should be conveyed away by a special contrivance.

We believe that no care in the manufacture or subsequent purification will ever supersede the necessity of ventilation. Some noxious products will always be emitted on combustion. We strongly insist that the first thing necessary is to improve the manufacture. If gas be originally prepared for distribution free from the contaminations at present observed, the mischief will be materially lessened at the very source. And it must be obvious that ventilation during combustion can have no effect in abating that antecedent nuisance which is now progressing without let or hindrance, and converting the soil of our streets into a common receptacle for the refuse of the gas works.—*London Lancet.*

PUERPERAL CONVULSIONS.

[Communicated for the Boston Medical and Surgical Journal.]

HEALTHY young women of a plethoric habit are, more than others, subject to convulsions, supervening at the birth of their first children. The short-necked, coarse-fibred, are perhaps most liable. In such, if the medical attendant notice mental excitement, giddiness and incoherence in speaking, he may not be surprised at the appearance of convulsions. In the Dublin Lying-in Hospital, but one case of this disease was found among all the preternatural labors that occurred in over 48,000 confinements. This fact might induce the conclusion that pressure upon the os uteri was the cause, but for the frequency of attacks during the complete dilatation of the organ. In the case which I shall report, convulsions appeared half an hour after the birth of the child. In such cases, the causes would appear to be the excitement and irritation produced upon the nervous system by the *entire labor*; also, that if a patient is attacked at any stage of the case before termination, it would appear that up to that point the irritation had been sufficient to cause them; that if attacked after the termination of the labor, the excitement had not been great enough until all the stages of the delivery had been experienced; that the irritation from half a labor would cause convulsion in the more predisposed, while the entire process was required for it in others. The susceptibilities of the constitution in these cases are governed by the same rules that regulate them in other diseases. If we have fever diathesis or predisposition, an adulterated miasm will cause an attack. It would require the severest torture to induce tetanus in some; only the prick from a pin in others. There are constitutions, doubtless, in which no degree of irritation upon any organ of the thorax or abdomen could produce spasms, either during confinement or childhood, by any impression upon the brain; in which organic sympathy is so obtuse that the effect is not conveyed beyond the *point d'appui* of the cause. In women of this constitution, we find local diseases; in the telegraphic temperament, general debility, on account of the facilities of communication. The latter is the best constitution, unless it be over sensitive, because the whole economy shares the irritation. This view of the causes is substantiated by autopsies, which reveal nothing but the effects of the labor in the region of suffering, in the form of peritoneal inflammation, &c. It is believed that some cases of fatal convulsions have occurred in instrumental labors, where, if the additional irritation from forceps had not been present, a favorable termination would have occurred. This is corroborated by favorable terminations to cases in my practice, in which, from the convulsive temperament, the instruments were dispensed with in protracted labors. It may be said that by the forceps, although causing a greater degree of irritation during application and use, the child is born sooner, and the strength of the mother, which is anti-convulsive, is retained. By the protraction, without their use, however, the patient is reconciled to her suffering, the parts are *gradually* relaxed, and the irritation *does not reach the acme* that the forceps create. In the interim the strength is maintained by nutriment, and encouragement from the obstetrician. The exhibition of ether would probably prevent some cases of convulsion. The difficulty of arriving at the benefit of it, is probably owing to the fact that when accoucheurs decide in regard to inducing anæsthesia in labor, they only resolve to give it when all indications conspire to make it advisable. It would be of use in every variety of convulsion. In the hysterical its efficacy is very apparent. In those cases where there is plethora and strong tendency of blood to the head, it is of service in warding off an epileptic attack, by moderating the mental action and thus diminishing the accumulation of blood. This would agree with what Dr. Dewees makes the immediate cause of convulsion appearing at the time of delivery, viz., the parturient effort. We know how far many organic functions are influenced by the action of the mind; how in surgery ether saves weaklings who could not have survived the great exertions of the will in submitting unetherized to important operations. Respecting the use of ether it would not be an unwise precaution for the accoucheur to always carry along a bottle of it, although the proportion of cases is small in which it is required.

[To be continued.]

QUOTATIONS FROM CARPENTER—REPLY TO DR. B. AND OTHERS.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—When I began my series of articles on alcohol as a medicine, it was my intention to define my position by a concise statement of principles, and the presentation of some facts that have come under my own observation, then submit to criticism, and meet any objection that might be worth notice. For this reason I have not replied to some articles in the Journal, in opposition to my views. Indeed, I looked upon it as unnecessary, because the objections were premature, and would never have been made, had the writers waited till they saw and understood my premises. Then, as the main points of my argument were not touched, I did not wish to be drawn from my course by any side issues. As I have been prevented by sickness from going on so fast as seemed desirable in order to keep the subject alive, I have concluded to glance at all that seems to require notice. I now respectfully ask a suspension of criticism, till my regular series is closed, and then it will afford me much pleasure to meet such questions and objections as may be presented. I would also suggest that, for obvious reasons, it would be more pleasant and satisfactory to know the names and address of the writers.

First on the list, comes Dr. B., of Philadelphia. In my article of March 29, while endeavoring to prove that alcohol is not useful as a stimulant in cases of debility, I made the following remark: "The apparent increase of strength is nothing more than the latent nervous energies, aroused for the sole purpose of driving out the enemy from the body. When this task is over, there is still greater exhaustion." Here I merely stated a principle, which has been established for thirty years, and I supposed was now understood by every school-boy. Yet Dr. B. takes me up on that, and says, "by this easy mode of reasoning, it can soon be shown that all medicines are injurious." So, rum is the key-stone to the arch, and the mighty fabric would immediately fall to the ground without it. Well, I, for one, am prepared for the crash. But, to be serious, suppose that it can be shown "by this easy mode of reasoning" that all medicines are injurious—it does not affect my argument in the least. Let every article stand on its own merits. I sincerely hope, if there is any other medicine or class of medicines in our materia medica, possessing no greater claim to our regard, than alcohol, that it will very soon fall a victim to this "easy mode of reasoning." But Dr. B. evidently misunderstands me. I do not discard all stimulants. Doubtless all the stimulant *tonics* are occasionally beneficial in arousing the various organs of the body to a vigorous performance of their various functions. The extracts which he made, refer solely to alcohol, a medicine *sui generis*, which I called, not a stimulant, but an *irritant poison.* I expressed no opinion in relation to stimulants, except in cases of convalescence from fevers, merely remarking that I would not take the responsibility of deciding whether any stimulant was ever necessary in those cases.

I shall decline being drawn off from the main subject, to discuss the question whether all medicines enter the circulation. I will say, however, to Dr. B., that I am not entirely ignorant of "late investigations" on this point, but am still of the opinion that the thing is extremely doubtful. Enough for my purpose, however, is known with certainty. There is positive proof that *alcohol* goes through the system unchanged. That it is taken up readily by the absorbents, no one doubts, whatever opinion he may have in relation to the hypothesis of its being taken into the circulation by *endosmose*, after the absorbents refuse to act. Suppose that the "ginger, spearmint, serpentaria," &c., do obey the laws of the latest physiologists, fulfil the expectations of Dr. B., and enter the circulation; there is this material difference—they are not poisonous, and may give a healthful stimulus to the organs and tissues with which they come in contact, while alcohol is a deadly poison, and no part of the human body, not even the external skin, can bear its continued application with impunity.

A word in relation to my extracts from Dr. Carpenter. Dr. B. accuses me of a misapplication of his arguments. If true, it was unintentional, and I am now unable to see my fault. Here Dr. B.'s criticism not only does me injustice, but implies a great error. He says, "that the quotations in the article under consideration, apply to the abuse of alcohol in health, is quite clear; but how it is that any one familiar with the views of Dr. Carpenter should have so entirely misapplied his arguments, perhaps Dr. Gilman can best explain." A few words will set this right. With the view of proving that alcohol is unnecessary, and even injurious in cases of debility, I quoted Dr. C. to show what was its precise operation on the body in a healthy state. I referred particularly to convalescence from fever, where there is in fact no disease, but simple debility. Is there any unfairness in calculating the effect of a medicine in such a case, from its known operation on the healthy body? If not, then my quotations from Carpenter were fair and exactly to the point. But we are left to infer from his remark that the operation of a medicine upon a healthy body, is no index to its operation on the same body in disease. Then of course in each disease, the operation of a medicine would be different, and could only be learned by actual experiment. This is a new doctrine to me. This rule must have been made for the special benefit of alcohol. I think that there is not an article in the materia medica which does not have substantially the same operation on the body, in sickness and in health, differing only in degree. What reason, then, have we to think alcohol an exception to this universal rule? If it is proved that the use of alcohol in the healthy body interferes with the nutritive operation by preventing a perfect elaboration of the fibrine, and prevents the decarbonization of the blood through the agency of respiration, then we may with as much certainty calculate on the same effect in sickness, as we may expect jalap to operate as a cathartic in dysentery, and ipecac. as an emetic in fever.

I would not be understood to say that a medicine which is uniformly injurious in health must necessarily be so in disease. The system may have been brought by disease into that particular state which requires the specific operation of a poisonous medicine to correct it, and yet the operation of the poison be precisely the same as in health; in one case, curative—in the other, poisonous. We think this true of opium, arsenic, strychnia, &c.

And now this brings me to say something of the use of alcohol in typhus fever. I did not introduce Dr. Carpenter to sustain my position. Although he goes farther than most foreign writers against the medicinal use of alcohol, I was aware that he made some exceptions, one of which is typhus fever, as shown in the extract from his physiology, referred to by Dr. B. I quoted him because I considered him good scientific authority for the effect of alcohol on the healthy system. Perhaps it will be found that alcohol is a specific antidote to the typhus poison, and the alcoholic the only successful treatment. That can only be decided by a long and faithful trial. To me, however, the practice looks so decidedly empirical, that I cannot believe Dr. C. to have been guided by any scientific deductions from his own premises in recommending it. He seems rather to have been driven to this special pleading for alcohol, to account for what he supposed to be facts in the statements of others. To me it would not seem a very difficult task to show Dr. C.'s inconsistency. At some future time I design, even at the risk of being jeeringly called a "philosopher," to review Dr. Carpenter's "exceptional cases." It is sufficient for my present purpose to remark that Dr. C. does not recommend alcohol in cases of debility. He looks upon typhus as partaking of the nature of a shock, not attended by exhaustion of the nervous energies, but a mere state of oppression; the alcohol acting as a specific stimulus to the nerves.

There is not a shadow of propriety in putting the "mineral and vegetable acids" beside alcohol, and asserting their equal power of "coagulating soluble albumen." There is a wide difference. While alcohol is unchanged by the digestive organs, goes through the system and comes in contact with every delicate tissue in the body, remaining the same poisonous fluid, and forming, not a chemical nor a vital combination with the blood, but a mere mixture—the acids, on the contrary, are digested before entering the circulation and converted into chyle. They are no more acids, but a component part of the blood.

Dr. B., in his closing paragraph, evidently supposing that he had entirely demolished me, calls me a "profound philosopher." Cruel man, thus to insult his prostrate foe! I make no pretensions of the kind. I do pretend, however, that I have some facts and arguments of great importance, and have a right to expect them to be met by facts and arguments instead of sneers.

I wish to remind Dr. Hall that there is one article which I call *the medicine of medicines*, which is decidedly beneficial in health; that is *water*. If this has the virtues awarded to it by the hydropathist, the doctor's rule is upset. Perhaps he will say that water is not a medicine. I presume that all will allow that its claims to our regard as such are at least equal to those of alcohol.

There are some points in J. C.'s article which I should notice, particularly the nature of a drunkard's appetite, but they will come in their proper place, and it would disarrange my plans to attend to them now. N. Gilman, M.D.

South Deerfield, *Aug.* 1, 1854.

TRIAL FOR MANSLAUGHTER—MEDICAL TESTIMONY, &c.

[Communicated for the Boston Medical and Surgical Journal.]

The following case may prove interesting to the profession, as showing, to some extent, the kind of medical testimony upon which criminal prosecutions are sometimes founded.

On the 26th day of July last, Miss E. M. Smith, a beautiful and intelligent young lady, who is engaged in teaching a school in this city, was arrested and brought before Justice Bates, on a charge of manslaughter. Upon the examination it appeared that, upon the 22d day of June, Miss S. had punished a boy (9 or 10 years old) by whipping him with a green switch, about half an inch in diameter at the butt, some two feet long, and tapering off to a point; and that during the whipping some three or four blows fell upon the head, two of which raised small stripes or welts which remained for some four or five days. The teacher was represented as having corrected the boy not in an angry or excited manner, but properly and mildly. No unusual effects were observed upon the scholar at the time. He remained until the close of the school, and spelt in his class as usual. In the afternoon he complained of some headache, and on the next day (the 23d) he vomited and bled at the nose. On the 24th he was at school again. At night he complained of some headache and nausea, and was quite restless. On the 25th he took some patent pills, but got no benefit from them. On the 26th he was confined to the bed, and on the 27th Dr. Grafton was called to see him, and continued in attendance until his death, which took place July 7th. This is the substance of the non-professional testimony in the case. For the prosecution, Drs. Grafton, Ball, Lewis and Wood, were called; and for the defence Drs. Mack, Chittenden, Barrows and Pease. We will give a brief synopsis of the testimony of these gentlemen. Those portions of the testimony of Drs. Grafton and Mack, which are Italicised, are to be compared with each other, that their disagreement may be fully noted.

Dr. Grafton sworn.—Was the attending physician in this case. Called, first, June 27th. Patient had no high fever at any time. Saw nothing resembling fever. Skin usually of natural temperature; often cool and sweaty. Pulse at no time frequent and strong; towards the last, frequent and feeble. Tongue had a whitish, or light yellow coat. Bowels rather costive. Vomited once or twice after he saw him. A little delirious once or twice when roused to take drink or medicine. This was only momentary. July 2d had a slight spasm of the arms and legs, which he (Dr. G.) attributed to irritation from operation of physic. No other convulsions at any time. Eyes never suffused or injected. Thought the pupils at one time not so large as they should be, considering the light in the room. Eyes were sensitive to light, and he complained of noise hurting him. Had violent paroxysms of pain in ears and eyes; face would flush, and he would cry out—oh my eyes! oh my eyes! Began to sink into a comatose state on the 5th, and died comatose on the 7th, at 8½, P.M. Conducted the post-mortem. No evidences of external injury. *No passive congestion about the brain. Membranes injected with arterial blood.* Some gelatinous effusion upon the convolutions of the brain. Membranes adherent to the brain at a point on the top of the head, an half inch by two or two and a half inches in size. *Arachnoid thickened at the base of the brain. Adherent to pia mater on the surface of the hemispheres. Six or eight ounces of turbid effusion in the ventricles. Some flocculi of lymph in fourth ventricle. No tubercles in the lungs. Mucous coat of stomach and bowels perfectly healthy. Considered the case one of well-marked inflammation of the membranes of the brain, affecting their entire substance. Symptoms were such as would not be present in any other disease. Pathological appearances unmistakable. The gelatinous effusion could not be produced except by inflammation. Believed the whipping was the exciting cause of the disease; that it must have operated by producing concussion of the brain.* Made up his opinion that the blows were the cause of the disease, *from the absence of all other causes in this case. Thinks he could have detected any other causes if they had been present.*

Dr. Ball sworn.—Has heard the testimony in this case. Has no doubt that the boy died of inflammation of the brain produced by the whipping. Whipping produced concussion on the brain. *Cross examined*—Been practising some twenty years. Been to California. Is now improving a farm. Preaches some on Sundays. Has no doubt that the blows produced concussion on the brain. Counsel asks—What is concussion of the brain? Witness hesitated a long time, and at last, when the question was repeated, said "they must excuse him, he was so confused he could not tell."

Dr. Lewis sworn.—Was present at the post-mortem examination. Thinks the case was one of inflammation of the brain, or hydrocephalus. Thinks the blows were the *remote* cause of the disease. Congestion of the brain was arterial. *Cross-examined.*—Arterial congestion all over the brain. Could not tell in what membranes. Could not tell what vessels were congested. Afterwards said he could tell, but would not. Is a regular practising physician. No body's business whether he ever graduated or not. Finally, said he had graduated at Fairfield. Did not receive a diploma. Students often graduate without receiving diplomas. Counsel here inquired if there were not two methods of graduating, one with white and the other with black balls, and if it was not in the latter method that no diplomas were given.

Dr. Wood sworn.—Has heard Dr. Grafton's testimony, and fully concurs with him in his views in relation to this case.

DEFENCE. *Dr. Mack sworn.*—Was consulting physician in this case. Had disagreed entirely with Dr. Grafton in their consultations. Considered the case to have been one of bilious remittent fever of a low type. Had advised a gentle tonic plan of treatment. Patient at one time took thirty-five grains of quinine, by his advice, to arrest a chill that was expected in the morning. Thought the patient was decidedly better after taking the quinine. Dr. Grafton refused to continue the tonic and sustaining course of treatment after the quinine was given, but placed the boy upon the use of calomel, morphine, croton oil, digitalis, antimony, wine of colchicum and nitre. He continued this course until the day before the patient's death. Believes these articles were highly injurious, the disease being one of a low grade of action, with at no time any high vascular excitement. Thinks the patient died of passive congestion of the brain, supervening upon a state of debility; that the persistent use of opium, digitalis and tartarized antimony, had directly tended to this result. Was present at the post-mortem examination. Meningeal vessels deeply congested with *dark venous blood.* Slight gelatinous or jelly-like effusion between the convolutions. Considered this the result of the simple congestion alone. *Might be produced by inflammation, but by itself was not positive evidence thereof.* Thought the small spot of adhesion of the dura mater on the top of the brain not recent. Judged by its firmness, and the absence of any effusion or discoloration in its vicinity. There was no plastic or organized lymph, or liquid or concrete pus found at any time during the examination. *There was no abnormal thickening or adhesion of the arachnoid.* This membrane is thicker at the base of the brain, and it is adherent by fine cellular substance to the pia mater over the surface of the hemispheres. Fluid in the ventricles was allowed to escape and run out upon the table, mixing with the blood, *so that it was impossible to determine its character or quantity. Saw no flocculi of lymph in the fourth ventricle. The lungs were not examined. Mucous coat of stomach much softened.* Bowels were not examined. *Saw nothing at the post-mortem examination, and had heard no testimony during this trial, that would justify him in attributing, in any way, this boy's sickness and death to the whipping he had received.* Inflammation of the brain from external injury would occur directly, in one of two ways. Either traumatic inflammation originating at the point of injury and traceable directly thereto, or inflammation ensuing upon the re-action from concussion, frequently originating at a point remote from the seat of violence and exhibiting upon a post-mortem examination no pathological connection between the external injury and the inflammation which had followed it. In these cases the fact that the brain had suffered from concussive force, must be shown from the character of the symptoms which followed the infliction of the blows. *In the case now under consideration there were none of the symptoms of concussion of the brain described as having been present at the time of the whipping, and, in fact, the character of the whip used was such as to preclude the possibility of any such effect having been produced.* Even if this case had been (as Dr. Grafton assumes) one of simple acute meningitis, *still no man could honestly and intelligently testify to the absence of all other causes except the whipping to have produced it,* as there are some causes of this disease which are wholly unknown, and the presence of which, therefore, *even Dr. Grafton himself would not be able to detect.*

Drs. Chittenden, Barrows and Pease, were sworn. Were all present at the post-mortem examination. They coincided with Dr. Mack in his description of the appearances observed, and sustained him in his views in relation to the case.

This closed the defence. The justice promptly dismissed the complaint, and the citizens presented Miss Smith with a beautiful gold watch and chain as an evidence of their sympathy for her in her unjust and malicious *persecution.*

INHALATION OF VAPOR OF IODINE IN PHTHISIS.

[Translated for the Boston Medical and Surgical Journal.]

At the meeting of the 24th January, 1854, of the Academy of Medicine, Paris, M. Piorry read a communication *on the curability of tubercles of the lungs by the vapor of iodine.* After some historical notices, M. Piorry said, that although pulmonary consumption, when left to run its course, was seldom cured, nevertheless from the many facts on record, obtained by autopsies of aged persons, solitary tubercles are more frequently susceptible of termination by cretaceous indurations, than is generally imagined. After enumerating the cases where an amelioration might be hoped for, and proving the inutility of the usual therapeutical resources up to the present time, he described his method of treating *pneumo-phymia* by means of the vapor of iodine. He commenced by mentioning the different experiments made with the same vehicle by divers persons at different times. M. Piorry employs both the tincture and the crude iodine for the purpose of impregnating the atmosphere with iodized vapor. He thinks the vapor produced from iodine preferable in all cases of pulmonary induration, and that from the tincture of iodine in cases where cells exist. Which of the two agents should be employed, must be determined by careful diagnosis.

From 1 to 2 grammes (15½ to 31 grains) of iodine are placed in a bottle or large-mouthed flask capable of holding a litre (1 1-5 wine qt.). Iodized vapors are disengaged in proportion to the degree of warmth and humidity of the atmosphere. When the tincture is used, from 30 to 100 grammes (7 ʒ to 26 ʒ) are put into the flask, and sufficient heat applied to disengage the mixed vapor of alcohol and iodine. It is the air thus impregnated with the vapor of iodine, or the mixed vapor of alcohol and iodine, contained in the flask, that is inhaled by the patient. Generally, but one inspiration is directed to be made, but it is necessary that it be deep. Exhibited in this manner, the inhalation of iodized vapors irritate the trachea but little. If the inspirations are continuous, acute pain in the larynx and bronchia and violent coughing are induced, and more serious accidents may be caused. This simple plan of inhalation must, however, be frequently repeated—one or two hundred times a-day, or even more.

Further, the patient is made to inhale iodized air, even during sleep. Saucers, each containing 1 gramme of iodine, are placed on the floor, near the head of the bed. In the hospital, small vials containing iodine are attached to the iron rods that support the canopy. The vaporization thus induced is very evident, and the atmosphere of the apartment or ward is so highly charged with it, that the starched white curtains of the bed assume a blue color, and the iron of the locks is completely iodized. M. Piorry generally prescribes from 1 to 3 grammes of the iodide of potash to each patient daily.

In those cases where the existence and depth of the lesion is suspected to lay between the pulmonary surface and the costal parietes, whether arising from adhesions, or that remarkable supplementary circulation which has been so elaborately described by Dr. Natalis (Guillot), friction with tinct. of iodine mixed with from 19 to 39 parts of water, is used over the parts affected.

Other treatment, as by the use of tartrate of antimony, sulphate of quinine, &c., may be added to the iodine treatment. In one case methodical compression of the thoracic parietes proved a useful auxiliary. To mark out organic lesions, previous to commencing the treatment, a large sheet of diachylon plaster is placed on the chest of the patient, on which are traced lines corresponding to the clavicles, the sterno-clavicular articulations, the projection of the sterno-mastoidal muscles, circumference of the heart, upper surface of the liver, and the nipples. Upon this it is easy to trace a very exact chart of the indurated parts to show their exact size, to make notes of the tone, obscurity of sound, numbness, hardness, and resistance offered to the fingers, and likewise to mark down the principal stethoscopic sounds, which is a valuable aid in the average of cases. After some time, and when the treatment has been fully tested, it is easy to re-place the plaster exactly upon the same part, for the marked lines of organic limitations serve as points to indicate the precise spot where the plaster was first placed.

M. Piorry summed up his communication by presenting the definite results obtained: from 31 cases of phthisis treated by the inhalation of iodine vapors under his care in the Hospital, a marked amelioration, both in the anatomical character and general symptoms, took place in 20 cases; disappearance of the principal anatomical character, and most of the symptoms, in 7 cases; died, with or without positive amelioration, 4 cases.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, AUGUST 16, 1854.

Lunacy Commission.—Notwithstanding the State of Massachusetts had erected a new hospital for 250 lunatic patients at Taunton, there were still complaints of the want of sufficient provision for the insane in the State. After all the patients belonging to the south-eastern counties, had been sent from the State hospital at Worcester to Taunton—almost enough to fill the new building—yet there were more patients left in Worcester than the hospital could accommodate. The hospital at South Boston, with rooms for 200, has got 263 patients. The asylum at Somerville was full to the overflowing, and applications were made for many more than could be received. There were 173 lunatics in the County Houses of Correction and the two receptacles connected with them. The trustees of the Worcester hospital reported, that that building was in need of great and probably very expensive repairs, and too much surrounded by a dense population, and suggested the expediency of disposing of the present establishment and building another on a better plan and in a more favorable situation.

In view of these facts, the Legislature, in April, created a Commission on Lunacy, for the purposes and with the duties described in the Resolves which were inserted in the Journal last week.

The duties of the Commission, which comprises the following gentlemen, viz.. Gov. Levi Lincoln of Worcester, Dr. Edward Jarvis of Dorchester, and Hon. Increase Sumner of Great Barrington—are

1. To ascertain the number and condition of the insane and idiotic persons in the State.
2. To determine, as nearly as they can, the number of these that are, or would be, benefited by the accommodations of a hospital for their care and restoration, and for how many of them the guardianship and custody of such an institution is, or should be, provided, either for their own protection or for the safety of the people.
3. To see to what extent these curative accommodations and custodial means are already provided.
4. To determine whether any further provision for this purpose should be made, and of what kind it should be.

5. To determine whether it would be for the interest of the patients and of the Commonwealth, that the hospital at Worcester should be repaired, or whether the building, with the whole or a part of the land now connected with it, should be sold, and another hospital built there or elsewhere.

6. To devise the best plan for the distribution and the general management of the insane.

7. To procure the best plan for the construction of any new hospital or hospitals, if such should be advisable.

The first business of the Commissioners was to be done, either by going themselves or employing deputies to visit every family, or through the agency of such persons as already knew the desired facts. The last seemed to be the most feasible way. There are few, perhaps no families, in this Commonwealth, that do not come within the observation of some physician, especially if there be any lunatic or idiotic person in them. The Commissioners, therefore, relying on the intelligence of the members of the profession, as well as on their known liberality and interest in pathological science, especially when connected with charity, determined to ask their co-operation in this part of their work. Accordingly they addressed a letter to each practitioner of medicine in Massachusetts, asking him to give an account of every idiotic or insane person living in or belonging to any private family, within his personal observation. The Commission asked for the names, so that if any should be reported by more than one physician, correction should be made, and none be counted twice. As the names will be kept secret from all but the Commissioners themselves, there need be no delicacy on this account. The public report will include only the numbers belonging to the several classes in the various towns and counties.

There are several other points on which information is desired. All of them are put into a blank form, which is sent to every one, and is to be filled out and returned. Thus the work required of any one is very small, and very easily done. For it is probable that almost, perhaps quite all can answer each of the questions asked, without going out of his office, merely by calling to mind the several families in which he is employed or acquainted.

Judging by the returns, that have begun already to come back to the Commission, it seems that the plan is an acceptable one and promises to be successful; and it is to be hoped, that every physician in the State will respond, in like manner, to this call. If this is universally done, we shall have a census of lunacy more complete than has been obtained in any State of this Union, and perhaps more so than has been obtained in any other country.

Auscultation and Percussion.—If in our day those who practise medicine neglect to make themselves familiar with the anatomy and diseases of the thoracic viscera, their ignorance must be imputed to their neglect of common privileges. Treatises on auscultation are among the most useful guides at the command of physicians. Like other branches of practical medicine, this of auscultation is progressive. Vigilant explorations and careful watchings, in connection with untiring examinations in minute anatomy, give the profession of the present time immense advantages over their predecessors. We have been led to these reflections by the sight of an admirable treatise, translated from the French of Joseph Skoda, by W. O. Markham, M.D., and published by Messrs. Lindsay & Blakiston, Philadelphia. Such is the desire for information on the subject of auscultation in this country, that a volume, abounding, as this does, with the instructions of an experienced master, will be in demand. Dr. Skoda is a German clinical teacher, of celebrity; and since the days of Laennec, no writer on this subject has presented equal claims to distinction. The volume is reasonable in price—a duodecimo in two parts—embracing, in the whole, 380 pages. Copies may be had, in this city, of Ticknor & Co.

New Work on Chemistry.—A great work may soon be expected from London, which will treat theoretically, practically and analytically of chemistry as applied to the arts. The author is Dr. Sheridan Muspratt, an eminent man of science, whose reputation warrants the highest expectations. Chemistry is so constantly undergoing revolutions, by new discoveries, that every successive writer has an opportunity of adding something to the previous stock of knowledge. A new feature will characterize this publication:—it is to abound with portraits of eminent chemists. Those most devoted to this important department of science, will be struck, we apprehend, on the examination of this production, with its completeness in the collection of facts connected with chemistry, the application of which to the arts and the general economy of life, is not to be estimated by dollars.

The Skin and Hair.—The second American edition of a small, but excellent book, by Erasmus Wilson, author of a well-known treatise on the diseases of the skin, has just been issued by Messrs. Blanchard & Lea, Philadelphia, copied from the revised London edition. When that house favored us with a copy of the first edition, it afforded a delightful entertainment to follow the philosophical author through page after page, where instruction was charmingly blended with a happy style of writing. The charm is preserved in the revised copy, accompanied by new materials, both curious and practically useful. The chapter on *the purposes of the hair* is alone worth as much as the entire cost of the work. All antiquity, in connection with modern facts and discoveries, touching that particular topic, are compressed into a small compass. The series of chapters, devoted to diseases of the skin, embrace a wide range of facts and suggestions, quite important to an every-day practitioner.

Quarantines to exclude the Cholera.—It is stated in the newspapers, that the authorities of St. John, N. F., have proclaimed quarantine laws upon all vessels arriving from places where the cholera is known to exist, and that they intend to enforce them. Among the places which are named in the proclamation are, the United States, Canada, Barbadoes, and St. John, N. B. We confess that this announcement takes us by surprise, as we had supposed all sensible men were thoroughly convinced, by this time, that the cholera is one of those migratory diseases whose progress no human efforts can confine or arrest. Cholera is not contagious. We do not believe it can be communicated from man to man by contact, or by the inoculation of its fluids into a well person. Quarantine enforcements, therefore, can have no other effect in warding off its approach, than to allay the fears and the excitement which are apt to be manifested when a sickness of such a character is hovering around. We are inclined to believe in the electrical, or magnetic theory as it is called, as explanatory of the predisposing cause of cholera; and that miasms from decomposing vegetable or animal matter, together with uncleanliness and imprudence in regimen and diet, are the excitants. Cholera has visited, in its course, countries having every variety of climate, and has been followed by nearly the same fatality in all. In its western progress at different times since the year 1817, the quarantine laws, which are strictly enforced in the cities bordering upon the Mediterranean, have not secured them from its attacks. It is really curious to trace its course, upon a map of the countries through which it has passed. It is seen that mountain ranges, wide rivers, lakes, and even oceans, have not been protective barriers against it. Such being the case, of what possible use is it to subject individuals to the tedious and uncomfortable situation of quarantine confinement, because they happen to come from a place where cholera existed at the time of their departure?

Effects of Bites and Scratches from Cats.—It is stated in the newspapers, that a lady of this city, a week or two since, in ascending a staircase, accidentally trod upon the tail of a cat, when the cat turned upon her, and bit her in the leg. The wound was dressed, and became nicely healed. In a fortnight from the time of the accident, the limb became very painful, and she began to exhibit constitutional symptoms. Such is the newspaper account of the affair, and we are led to this allusion to it, in consequence of having had a lady patient under our care the past week, who had been scratched upon the back of the hand by a cat. In our case, the wounds had entirely healed before we saw the patient; but constitutional symptoms were present, as also pain and tenderness in the limb, from the ends of the fingers to the arm-pit. She was greatly alarmed, and our attendance was urgently requested. Upon examining the limb, it was found that the parts near the place of injury were much inflamed, and the whole track of the absorbents along the inner side of the arm were also inflamed to a considerable degree. Leeches were applied to the palm of the hand, and the bleeding from the bites was encouraged by the application of warm water and poultices. The arm was kept constantly fomented by a decoction of poppy flowers; and a large poultice of equal parts of ground flaxseed and poppy flowers was applied to the hand, every part of it being covered. By persevering in this treatment for three days, the inflammation abated, and she is now in a fair way of recovery. Pus could not be detected, nor is there reason to suppose any had formed under the fascia. The fingers, which were powerfully contracted, or flexed upon the palm, have assumed their natural position. There is something singular connected with these injuries received from the feline species, which we have never yet been able to account for. It is a question, whether there really is any thing of a poisonous nature in their teeth or claws, which should produce such an effect upon persons wounded by them. There is one other circumstance connected with these animals, and the accidental bites or scratches which they may inflict upon individuals, that deserves notice. It seems to have been a custom among *civilized* people, for ages, to have sentence of death passed upon them when they have unfortunately drawn blood from their masters. In the first case alluded to above, the paragraph closes by saying that "the cat has been destroyed." So in our own case, the lady informed us that she had caused the cat to be "executed." And we believe, so far as our memory serves us, that in every recent case of injury from cats, summary execution of the animal has always followed. Now it is not supposed that this is done from revengeful feelings, but from the popular but superstitious belief that it is necessary to do it in order to have the wound heal, and the patients get well.

Death of Dr. Washington.—The death of Dr. Bailey Washington is recorded in another part of the Journal. He was one of the senior surgeons in the United States Navy, having entered the service in 1810, and has ever since served this department with a devotion seldom surpassed. He was the surgeon of the Enterprise when she captured the Boxer during the war of 1812, and afterwards acted with great efficiency on Lake Ontario, under Commodore Chauncey, and was selected by him as fleet surgeon, although a junior officer in the service. He was afterwards fleet surgeon under Commodores Rogers, Elliot and Patterson, in the Mediterranean, and closed his active sea service during the Mexican war. At the time of his death he was consulting and visiting surgeon of the navy yard and marine barracks in Washington. We believe he was a nephew of Gen. George Washington, and a brother of Col. Washington who lost his life on board the steamship San Francisco, some months since.

A Liberal Donation.—The Savannah Republican states that Dr. William Terrell, of Sparta, Ga., has made a donation of twenty thousand dollars to the Franklin College at Athens, for the purpose of endowing a professorship of Agricultural Chemistry. He has suggested that Dr. Daniel Lee, editor of the Southern Cultivator, be appointed to fill the chair.

Boylston Medical Prizes.—The Committee of the Boylston Medical Prize Questions, it will be perceived by an advertisement on our last page, have awarded the prizes this year—one to Dr. Silas Durkee, of Boston, for the best dissertation on "The Constitutional Treatment of Syphilis," and the other to Dr. George H. Lyman, also of Boston, for the best dissertation on "The Non-malignant Diseases of the Uterus." The question for next year is, "On the Diagnosis of the Diseases of the Urinary Organs." For the best dissertation on this subject a premium of 120 dollars, or a gold medal of that value, will be awarded. It is presumed, in consequence of the increase in the premium to be awarded, and the interesting topic to be discussed, there will be many competitors for the prize.

Reports in Cholera Cases.—A copy of the blank reports furnished to physicians in Providence, R. I., has been received from that city. It is intended to be filled out, in each case of cholera, and returned to the city clerk. There are blanks for twenty-one items to be recorded, and these items are such as are most important to be known in regard to every case of cholera, and which, if furnished, will comprise a mass of valuable information respecting the previous habits, history and actual condition of those who are attacked by this disease in Providence. The treatment of each case will also be shown, and the result.

University of Michigan.—Professor A. B. Palmer has been transferred from the chair of Anatomy to that of Materia Medica, Therapeutics and Diseases of Women and Children. Professor Ford, of the Castleton Medical School. is appointed to the Chair of Human Anatomy, and Dr. E. Andrews chosen Professor of Comparative Anatomy. Professor Sager takes the department of Physiology, instead of that of Diseases of Women and Children, transferred to Professor Palmer.—*New York Medical Times.*

Medical Miscellany.—In a circle of seven miles, in Wayne Co., Pa., thirteen families have 165 children! One man of the neighborhood is the father of 29 of the children.—A medical student attempted the murder of a whole family in New York, by putting oxymuriate of mercury in the tea-caddy.—Some neighbors of a family in Buffalo, while the father and mother were at a funeral put lime in the bed where were two children sick with cholera, to smother the infection.—A negress lately died in Virginia, at the great age of 140 years.—Since the cholera first appeared at Jessore, in 1817, it is supposed that 18 millions of human beings have died of it.—Dr. Chandler of New Orleans, has been arrested for killing a gentleman from Boston.—Dr. W. B. Thompson, of Covington, Va., has been arrested for causing the death of a young lady, on whom an abortion had been effected.—The Dayton Gazette gives an account of a German woman living in that county, who has had six children at one birth. The children are now six months old, all alive, and were in Dayton with their mother on Tuesday. They are all boys, and small of their age.—A woman died in Boston last week at the age of 102 years.—Dr. John B. Wetherspoon, of Greensboro', Ala., is the owner of a bible in manuscript, written on parchment in A.D. 1500.—Upwards of eleven hundred persons died in New York week before last.—The State authorities have given notice, that suitable accommodations have been prepared at Rainsford Island, in Boston harbor, for persons infected with the smallpox.—It is reported that 12000 persons have died from cholera within the last sixty days, in Barbadoes (West Indies), but the disease is now abating.

NOTICE.—The Title-page and Index to vol. 50 will be sent to subscribers in the next number of the Journal.

PAMPHLETS RECEIVED—The eighth annual announcement of lectures of Starling Medical College (Ohio) for the session of 1854–5—A Catalogue of the Trustees, Faculty and Students, with a list of the graduates, of the Medical College of the State of South Carolina, session of 1854–5—The annual announcement of the Medical Department of Pennsylvania College, Philadelphia, session of 1854–5.

MARRIED,—Dr Benjamin Johnson, of Dover, N. H., to Miss E. Chadbourne.—At Bellmont, Ala., Dr. George D. Hall, of Gaston, to Miss Sarah E. Parks, formerly of Springfield, Mass.

DIED,—In Washington city, Aug. 5th, Dr. Washington.—In Coleraine, Dr. Christopher Deane, aged 72.—At Detroit, Mich., Dr. George Bigelow, 57, formerly from New England.

Deaths in Boston for the week ending Saturday noon, Aug. 12th, 129. Males, 69—females, 60. Accident, 1—burns and scalds, 1—disease of the bowels, 3—inflammation of the brain, 1—disease of the brain, 1—congestion of the brain, 1—consumption, 15—convulsions, 5—cholera, 31—cholera infantum, 10—cholera morbus, 1—cancer, 1—dysentery, 7—diarrhœa, 2—dropsy, 3—dropsy in the head, 3—infantile diseases, 10—puerperal, 1—exposure, 1—typhus fever, 2—typhoid fever, 3—scarlet fever, 1—hemorrhage, 1—hooping cough, 2—intemperance, 2—laryngitis, 1—inflammation of the lungs, 1—disease of the lungs, 1—marasmus, 3—old age, 2—scrofula, 1—suicide, 1—teething, 5—thrush, 2—worms, 1—unknown, 2.

Under 5 years, 56—between 5 and 20 years, 12—between 20 and 40 years, 29—between 40 and 60 years, 23—above 60 years, 9. Born in the United States, 80—Ireland, 44—England, 1—British Provinces, 2—Germany, 1—unknown 1.

Chloroform Ointment.—This may be made by incorporating from one to two drachms of chloroform with an ounce of lard or simple cerate. Dr. Ronald, of Louisville, found it very effectual in relaxing a rigid os uteri, which had resisted blood-letting, tartar emetic and warm bathing. It was freely applied to the external surface of the neck of the uterus, causing a slight smarting sensation, which in other cases was not felt if applied during the contraction of the organ. In twenty-five minutes the os uteri was found dilating rapidly, soft and pliant; and in one hour and twenty-seven minutes the woman was delivered. We have never failed to succeed in such cases by means of blood-letting alone, but there may be such as require other appliances; and from this account of chloroform, it seems likely to prove more effectual than belladonna, which has latterly been highly extolled as a relaxant.—*Memphis Medical Recorder.*

Compression of the Subclavian Artery.—We have it laid down as an axiom in the greater portion of our class-books, not only on surgery but also on anatomy, that to command hæmorrhage from the subclavian or axillary artery, in amputation of the shoulder, we have only to compress the vessel from above the clavicle, against the first rib, not making the pressure directly downwards, but forwards and backwards. Presumptuous as it must and no doubt will appear for me to think of differing from such high authorities, yet, with the greatest deference to all and each of them, I cannot but think that, if we look at the position which the subclavian occupies at the point where it passes over the first rib, we will see that it is no such easy matter to compress it as one might first imagine. But were there no anatomical difficulties to be overcome, there is still another obstacle to using pressure on the subclavian artery above the clavicle. And what is this? Spasm of the muscles which surround this joint at the moment of operation. We have our patient, with his arm stretched out at a right angle with the body; we have our assistant trying to use compression in the way taught; we transfix the deltoid, and the moment we do so, contractile spasm follows, the effect of which is, to throw up the clavicle, deepen the arch, and make tense the fascia: thereby putting it completely out of the assistant's power to use compression on the vessel, at least with any effect.—*Mr. Skinwin in Dublin Hospital Gaz.*

Election of a Foreign Associate to the Academy of Sciences in Paris.—In consequence of the death of M. Leopold de Buch, the committee appointed, by the Academy of Sciences of Paris, presented the following list. On the first rank, M. Dirichlet, of Berlin; and on the second, alphabetically, Messrs. Airy, of Greenwich, Ehrenberg, of Berlin, Liebeg, of Giessen, Melloni, of Naples, Müller, of Berlin, Murchison, of London, Owen, of London, Plana, of Turin, Struve, of Pulkowa. M. Dirichlet was elected Foreign Associate.—*London Lancet.*

The Chemistry of Respiration.—Vierordt calculates that the oxygen absorbed by an adult man in twenty-four hours (part of which is given off as carbonic acid and water, and part retained in the body), amounts to 746 grammes, or 520,601 centimetres (about 31,740 cubic inches); consequently, about 116 grammes of the absorbed oxygen are retained in the organism. According to Boussingault's determinations, about 8 grammes of nitrogen are given off in the same period; and the researches of Valentin show that there are also evolved about 500 grammes of water.